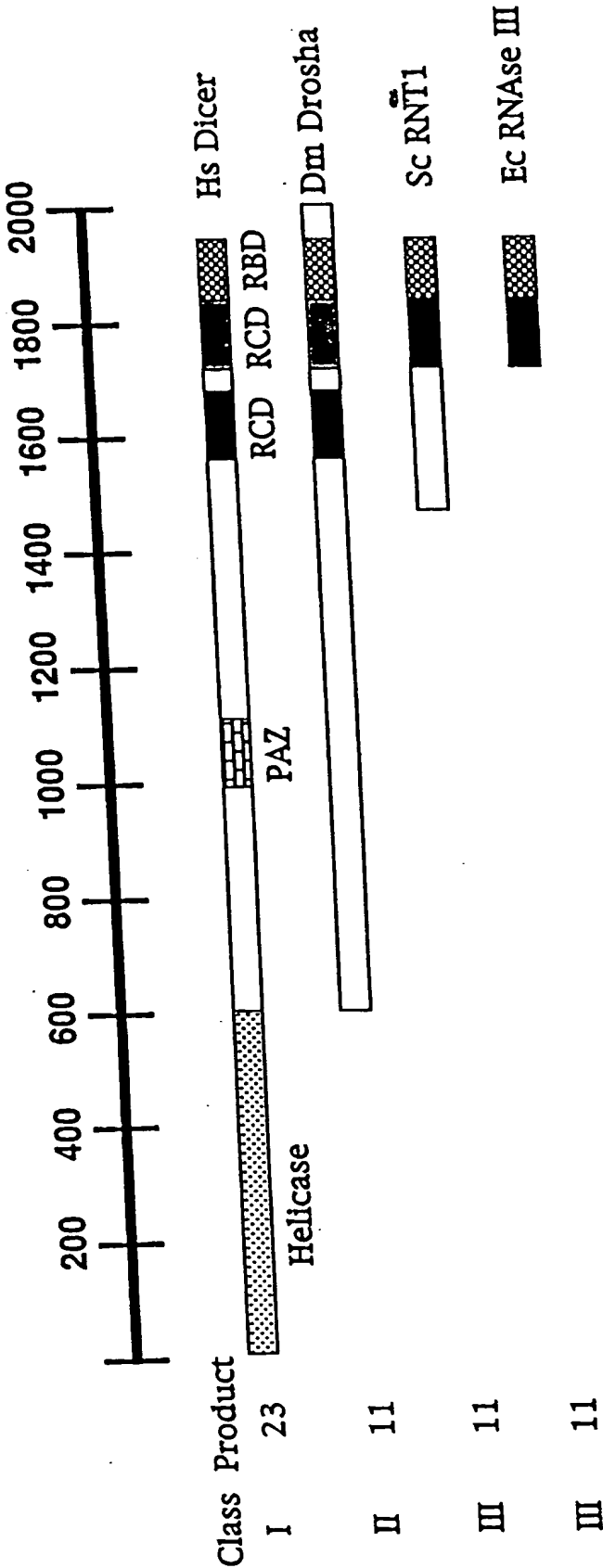


Figure 1

RNAse III class proteins



RCD - RNAse III RNA cleavage domain
RBD - RNAse III dsRNA binding domain

1	<i>Pasteurella multocida</i>	(SEQ ID NO:9)	1	LEFLGDAI	INNF
1	<i>H. influenzae</i>	(SEQ ID NO:10)	1	LEFLGDSI	INNF
1	<i>S. typhimurium</i>	(SEQ ID NO:11)	1	LEFLGDSI	INNF
1	<i>E. coli</i>	(SEQ ID NO:12)	1	LEFLGDAI	INNF
1	<i>V. cholerae</i>	(SEQ ID NO:13)	1	LEFLGDAI	INNF
1	<i>P. aeruginosa</i>	(SEQ ID NO:14)	1	LEFLGDAI	INNF
1	<i>H. pylori</i>	(SEQ ID NO:15)	1	LEFLGDAI	INNF
1	<i>S. pyogenes</i>	(SEQ ID NO:16)	1	LEFLGDAI	INNF
1	<i>S. pneumoniae</i>	(SEQ ID NO:17)	1	LEFLGDAI	INNF
1	<i>B. subtilis</i>	(SEQ ID NO:18)	1	LEFLGDAI	INNF
1	<i>Borrelia burgdorferi</i>	(SEQ ID NO:19)	1	LEFLGDAI	INNF
1	<i>M. leprae</i>	(SEQ ID NO:20)	1	LEFLGDAI	INNF
1	<i>Aquifex aeolicus</i>	(SEQ ID NO:21)	1	LEFLGDAI	INNF
1	<i>Rickettsia conorii</i>	(SEQ ID NO:22)	1	LEFLGDAI	INNF
1	<i>A. tumefaciens</i>	(SEQ ID NO:23)	1	LEFLGDAI	INNF
1	<i>S. cerevisiae</i>	(SEQ ID NO:24)	1	LEFLGDAI	INNF
171		(SEQ ID NO:25)	171	LEFLGDAI	INNF
50	<i>Pasteurella multocida</i>	(SEQ ID NO:9)	50	LEFLGDAI	INNF
49	<i>H. influenzae</i>	(SEQ ID NO:10)	49	LEFLGDSI	INNF
51	<i>S. typhimurium</i>	(SEQ ID NO:11)	51	LEFLGDSI	INNF
51	<i>E. coli</i>	(SEQ ID NO:12)	51	LEFLGDAI	INNF
50	<i>V. cholerae</i>	(SEQ ID NO:13)	50	LEFLGDAI	INNF
50	<i>P. aeruginosa</i>	(SEQ ID NO:14)	50	LEFLGDAI	INNF
50	<i>H. pylori</i>	(SEQ ID NO:15)	50	LEFLGDAI	INNF
50	<i>S. pyogenes</i>	(SEQ ID NO:16)	50	LEFLGDAI	INNF
50	<i>S. pneumoniae</i>	(SEQ ID NO:17)	50	LEFLGDAI	INNF
50	<i>B. subtilis</i>	(SEQ ID NO:18)	50	LEFLGDAI	INNF
50	<i>Borrelia burgdorferi</i>	(SEQ ID NO:19)	50	LEFLGDAI	INNF
50	<i>M. leprae</i>	(SEQ ID NO:20)	50	LEFLGDAI	INNF
50	<i>Aquifex aeolicus</i>	(SEQ ID NO:21)	50	LEFLGDAI	INNF
50	<i>Rickettsia conorii</i>	(SEQ ID NO:22)	50	LEFLGDAI	INNF
50	<i>A. tumefaciens</i>	(SEQ ID NO:23)	50	LEFLGDAI	INNF
50	<i>S. cerevisiae</i>	(SEQ ID NO:24)	50	LEFLGDAI	INNF
251		(SEQ ID NO:25)	251	LEFLGDAI	INNF

Figure 2

Figure 3

RNAse Activity of E38A

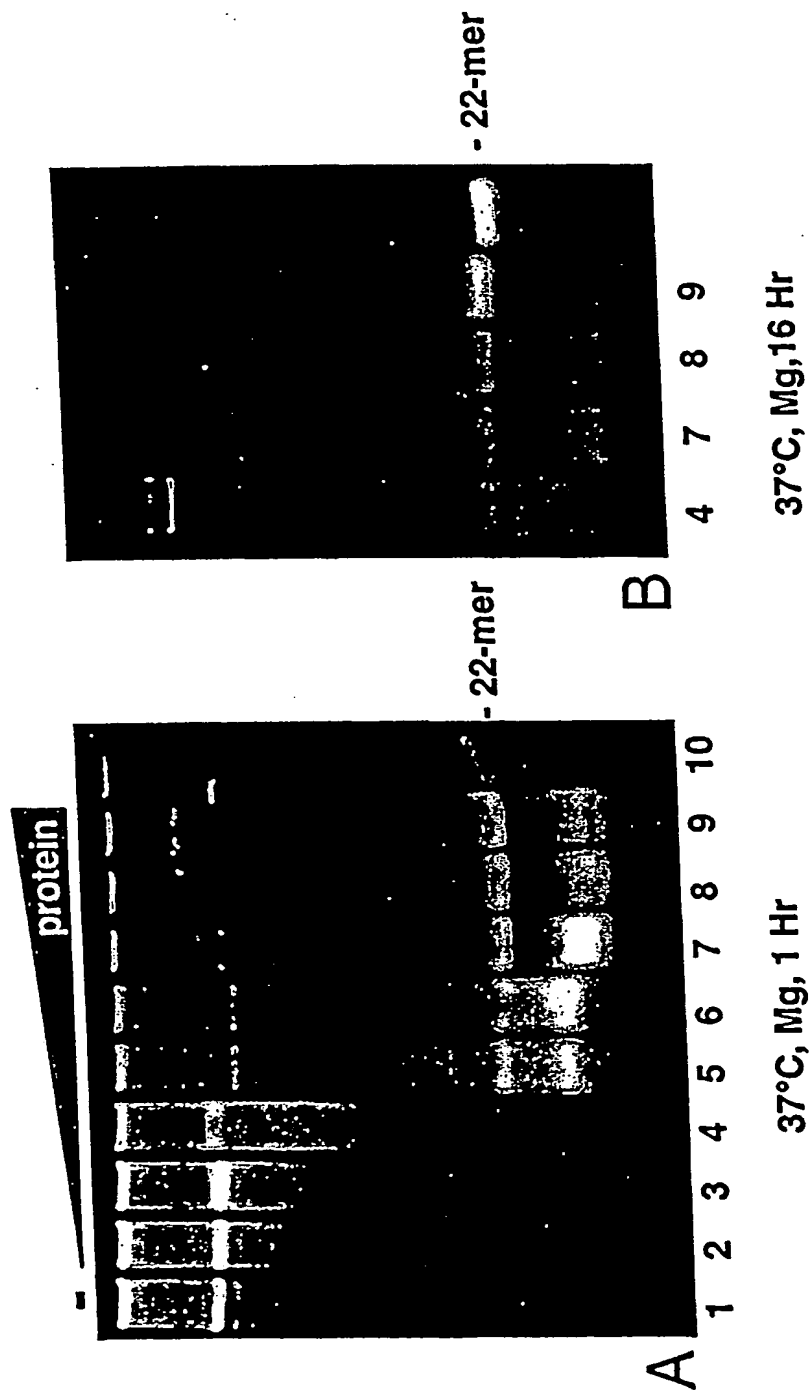


Figure 4 RNAse Activity of E38A

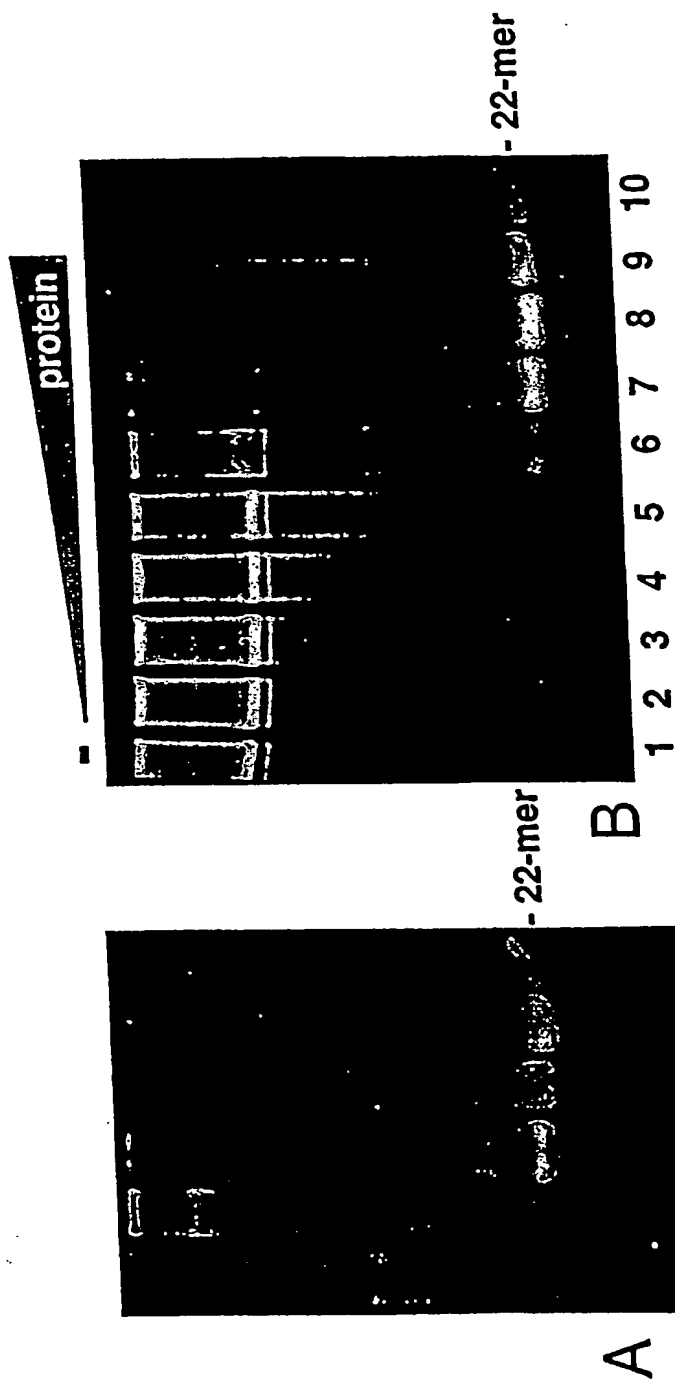


Figure 5
RNase Activity of E38A

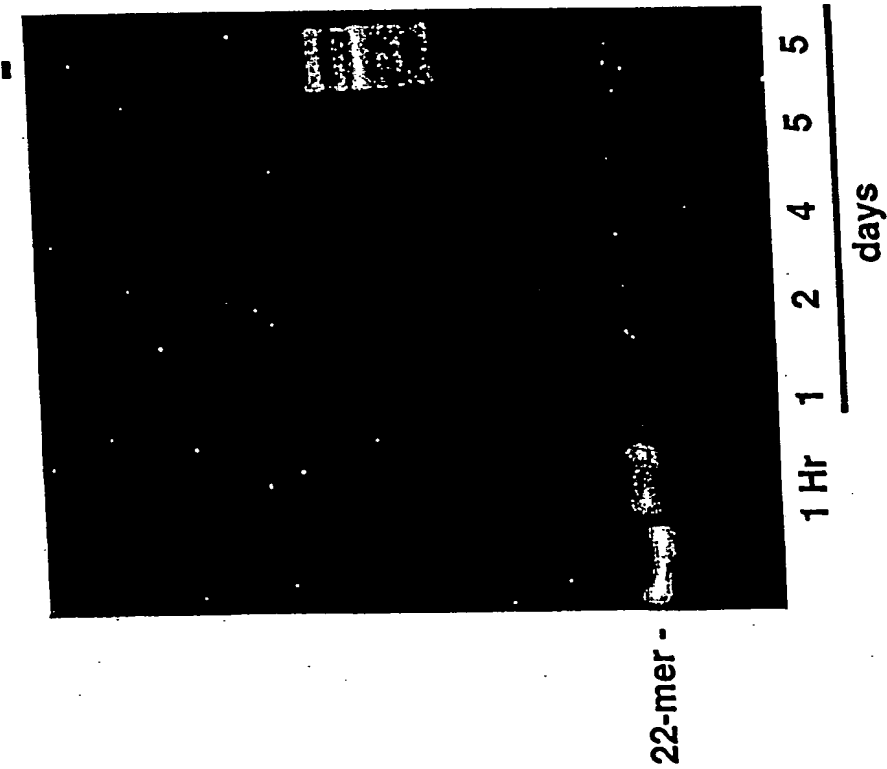


Figure 6 RNase Activity of E38A

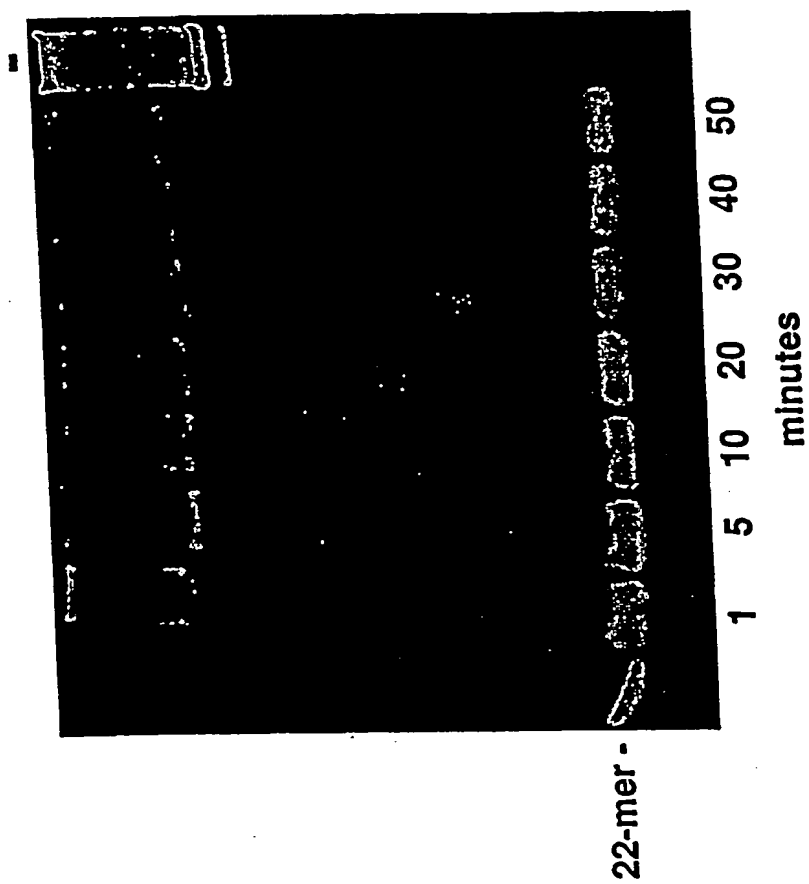


Figure 7 RNase Activity of E38A

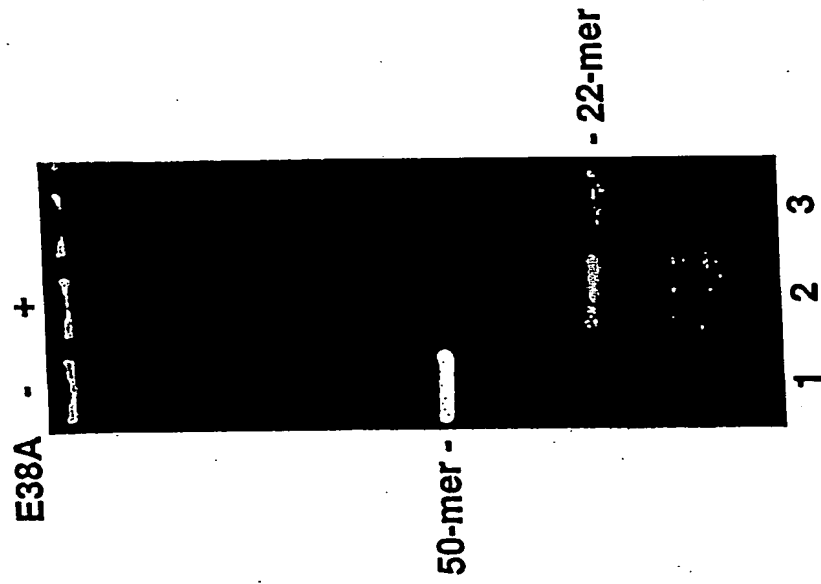


Figure 8

Comparisons

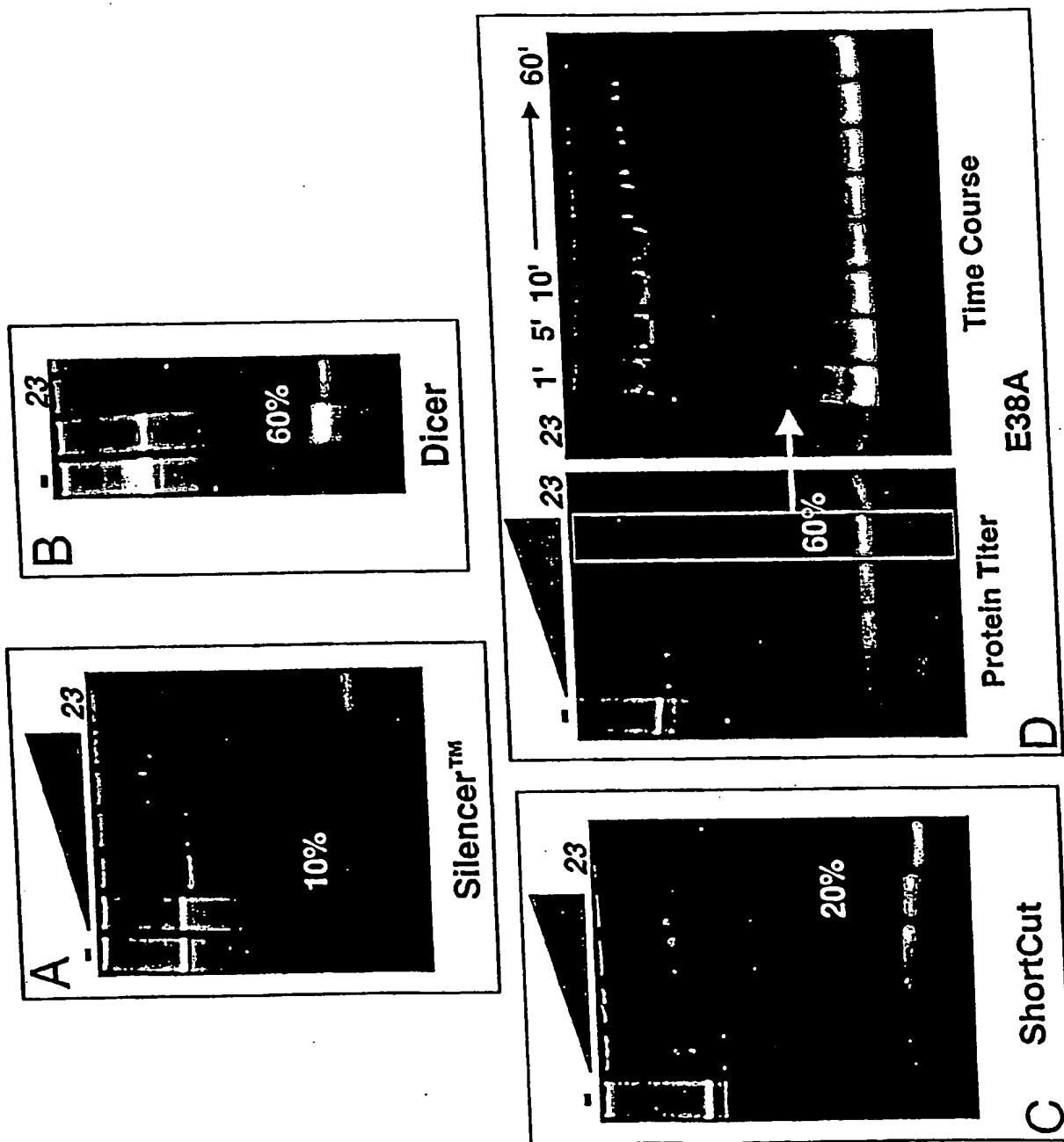
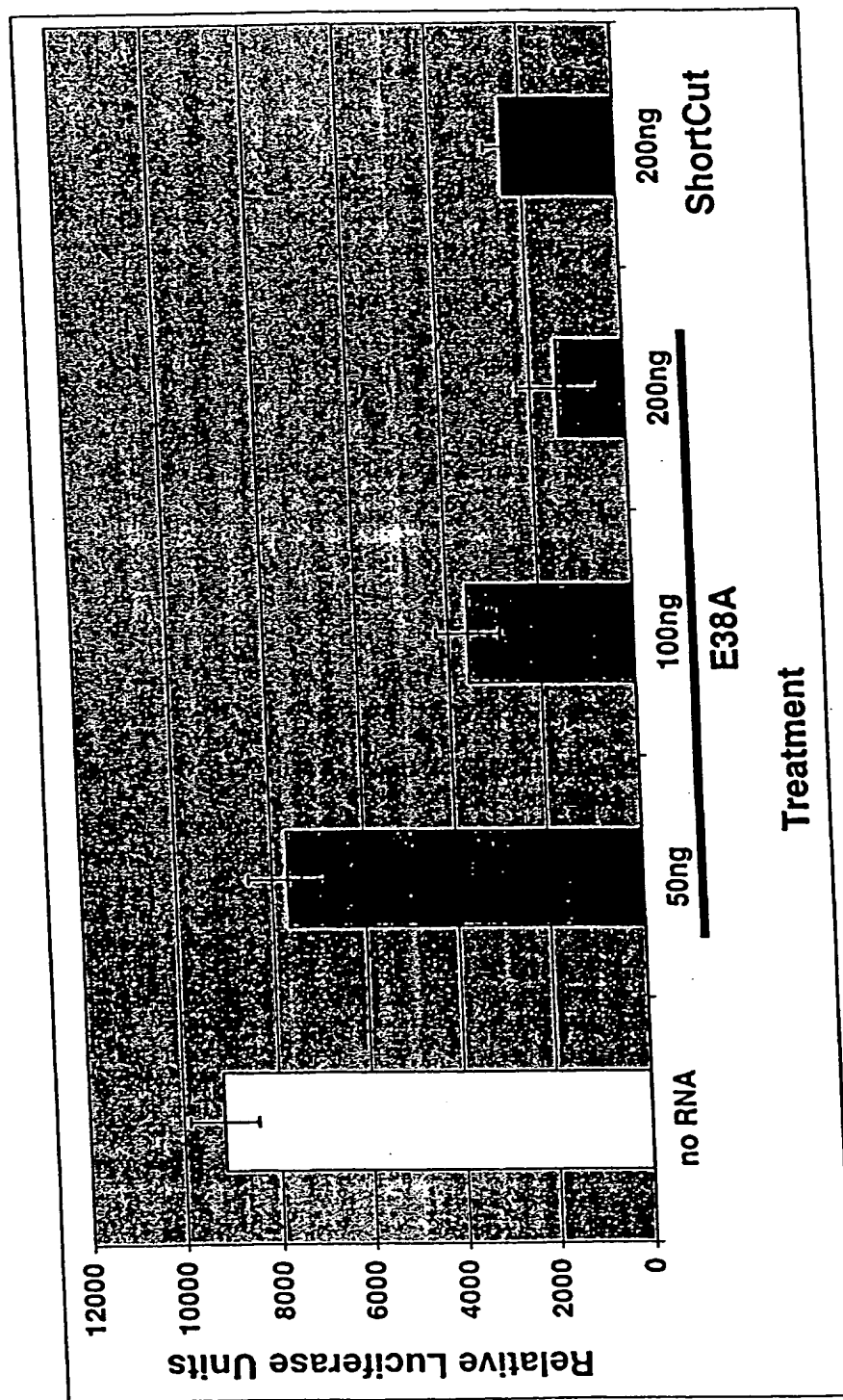


Figure 9
RNAi activity of E38A-cleaved dsRNA



Luciferase activity in transfected NIH 3T3 cells

Figure 11 RNAse Activity of E38T & E38W

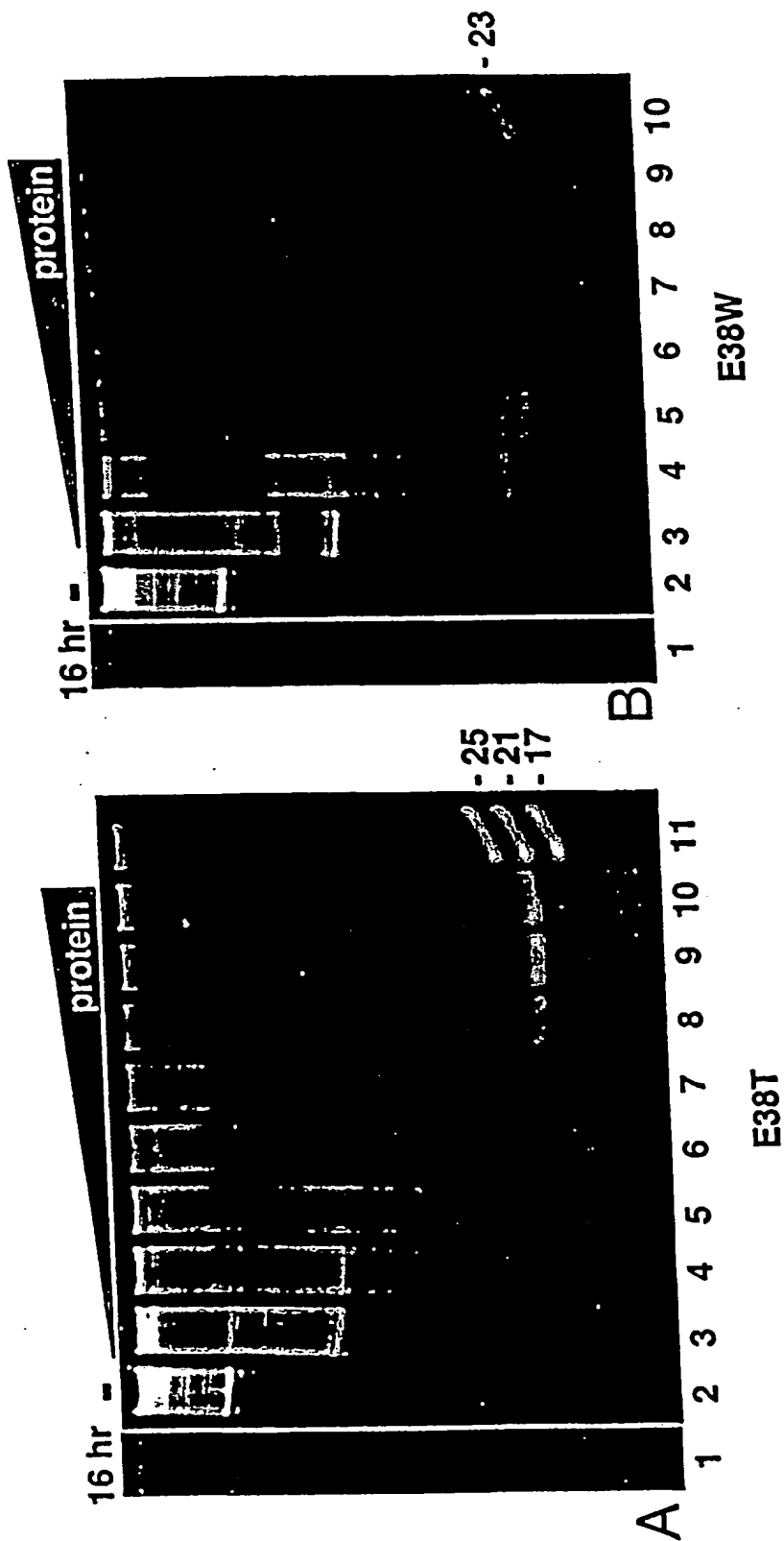


Figure 12

E. coli RNase III Mutants

<i>Aquifex aeolicus</i>	wt	37	ETLEFLGDA	63	REGFLS	107	DVFEAL
<i>E. coli</i>							
E38D	wt	38	ERLEFLGDS	64	DEGDMS	114	DTVEAL
E38K	wt	38	DRLEFLGDS	64	DEGDMS	114	DTVEAL
E38Q	wt	38	KRLEFLGDS	64	DEGDMS	114	DTVEAL
E38P	wt	38	QRLEFLGDS	64	DEGDMS	114	DTVEAL
E38V	wt	38	VRLEFLGDS	64	DEGDMS	114	DTVEAL
E38A	23	38	ARLEFLGDS	64	DEGDMS	114	DTVEAL
E38T	23	38	TRLEFLGDS	64	DEGDMS	114	DTVEAL
E38W	23	38	WRLEFLGDS	64	DEGDMS	114	DTVEAL
D45V	wt	38	ERLEFLGVS	64	DEGDMS	114	DTVEAL
D45A	i	38	ERLEFLGAS	64	DEGDMS	114	DTVEAL
E65P	wt	38	ERLEFLGDS	64	DPGDMS	114	DTVEAL
E65A	23	38	ERLEFLGDS	64	DAPGDMS	114	DTVEAL
E117D	i	38	ERLEFLGDS	64	DEGDMS	114	DTVEAL
E38Q,E65P	wt	38	QRLEFLGDS	64	DPGDMS	114	DTVEAL
E38A,E65A	wt	38	ARLEFLGDS	64	DAPGDMS	114	DTVEAL

Figure 13
E117D, E38A mixtures produce multimers of
23 bp product

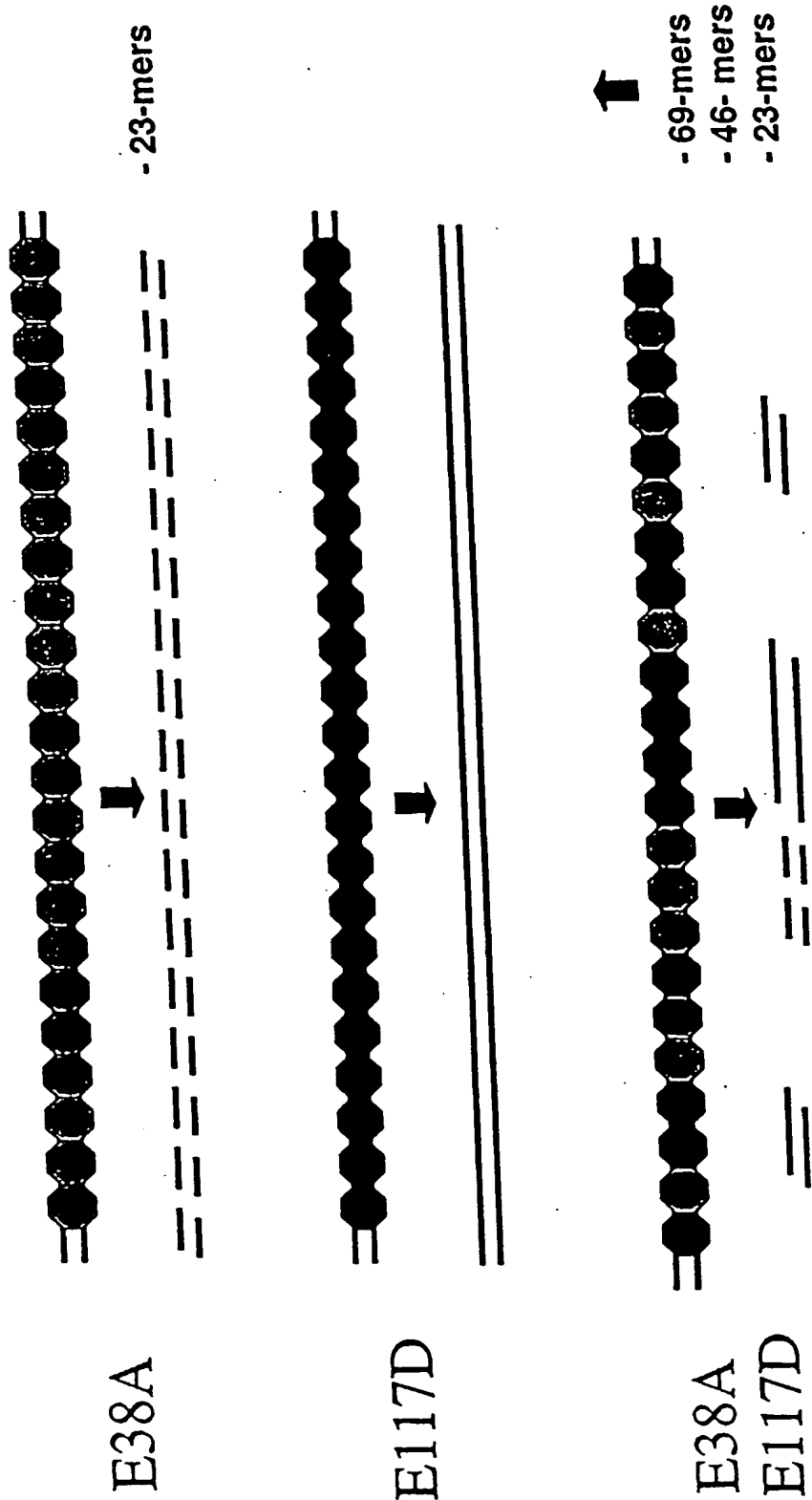


Figure 14
E117D, E38A mixtures produce multimers of
23 bp product

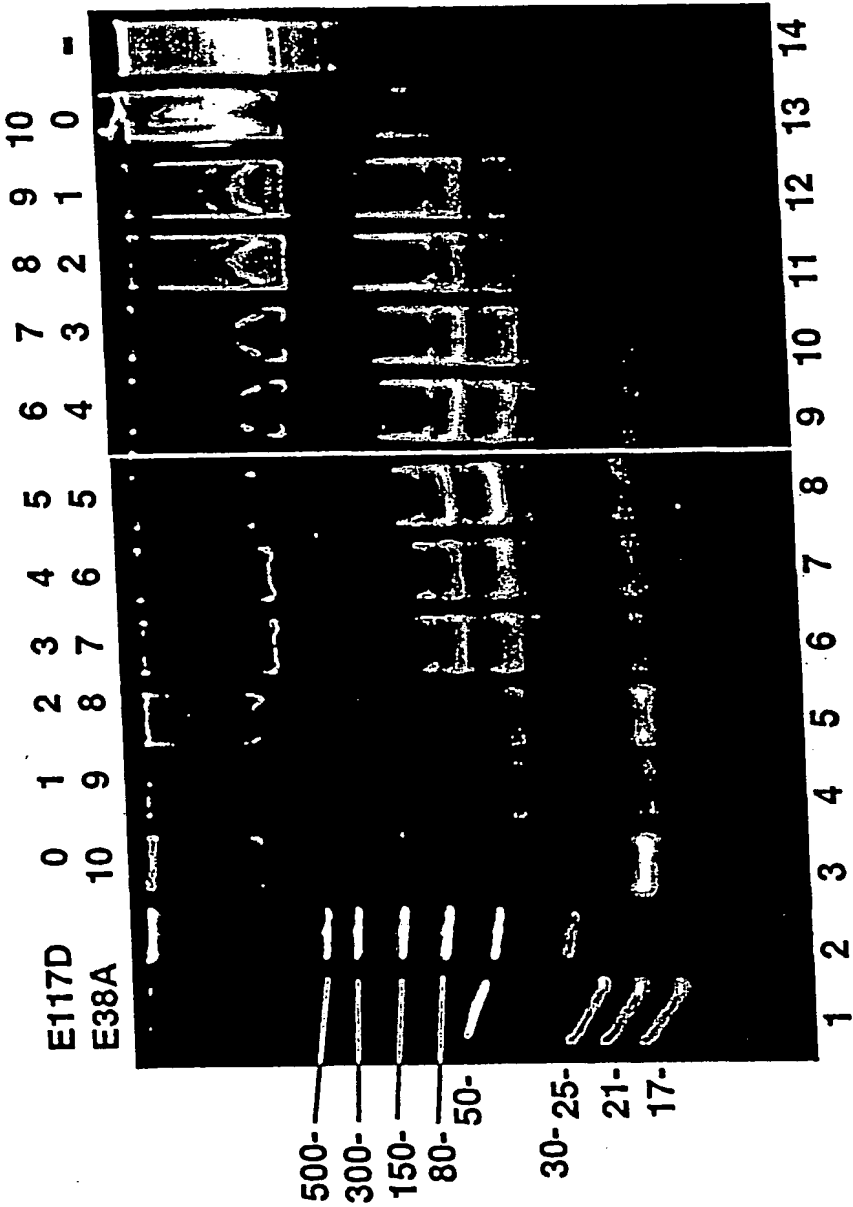


Figure 15
E117D, WT mixtures produce multimers of 23 bp product

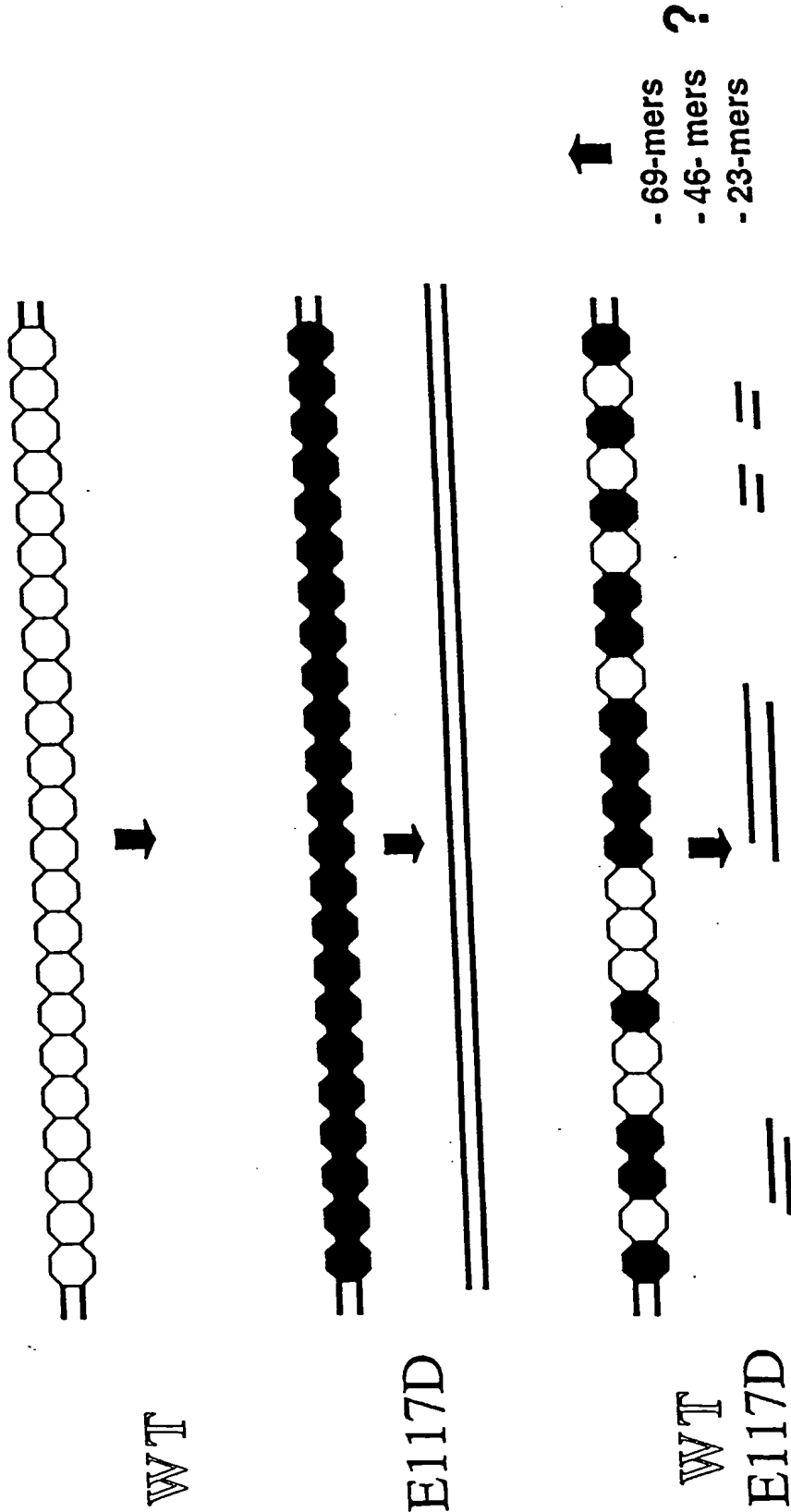
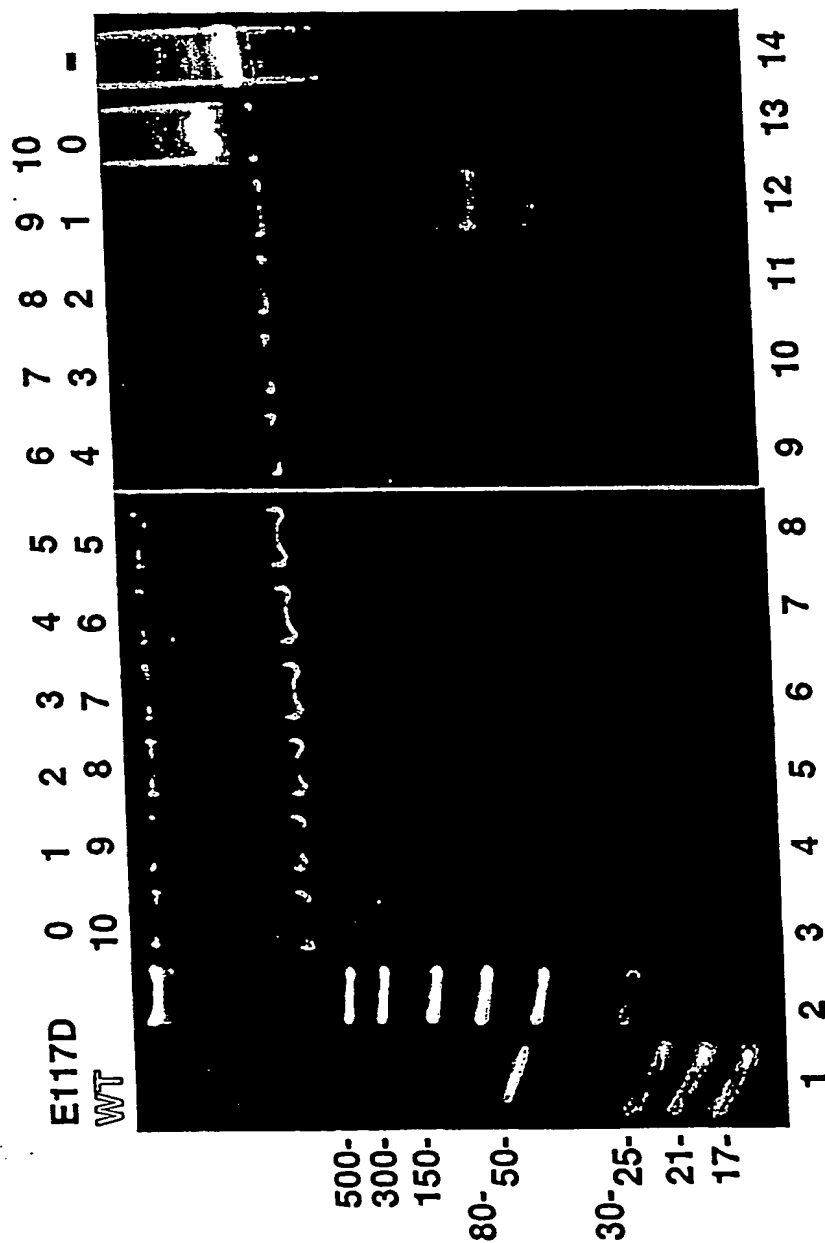


Figure 16
E117D, WT mixtures produce multimers of
23 bp product



siRNA evaluation tool (EXPERIMENTAL) v0.57 results - Thu Jan 13 15:59:54 2005

Query: Homo sapiens tumor protein p53 (Li-Fraumeni syndrome)
NM_000546 (TP53), mRNA.
Query Length: 2629 nt
Displayed Region: 1 - 2608
Database Searched: Homo_sapiens -- NCBI :: hs.fna
Min Match Length: 21 nt

Hits to the following DB sequences were filtered out of the results (user cutoff 1.0E-70):
gi|8400737|ref|NM_000546.2| E-val:0.0

Current resolution is 4 base(s).

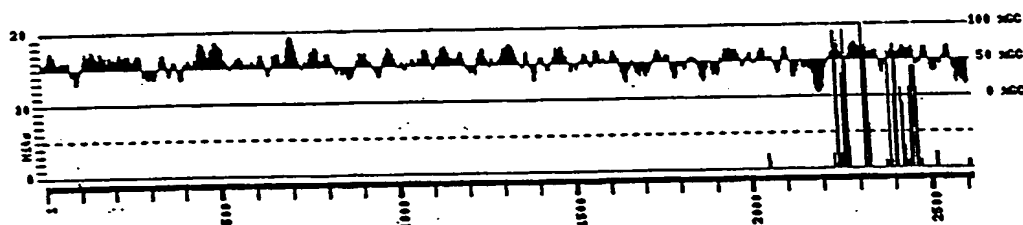


Figure 17

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